

CLAIMS

1. A radio communication system comprising a primary station and
5 a plurality of secondary stations, the system having a communication channel
between the primary station and a secondary station, one of the primary and
secondary stations (the transmitting station) having means for transmitting
power control commands to the other station (the receiving station) to instruct
10 it to adjust its output transmission power in steps, wherein the receiving station
has combining means for processing a plurality of power control commands to
determine whether to adjust its output power.

2. A primary station for use in a radio communication system having
a communication channel between the primary station and a secondary
15 station, the primary station having means for adjusting its output transmission
power in steps in response to power control commands transmitted by the
secondary station, wherein combining means are provided for processing a
plurality of power control commands to determine whether to adjust its output
power.

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3. A secondary station for use in a radio communication system
having a communication channel between the secondary station and a primary
station, the secondary station having means for adjusting its transmission
power in steps in response to power control commands transmitted by the
25 primary station, wherein combining means are provided for processing a
plurality of power control commands to determine whether to adjust its output
power.

4. A secondary station as claimed in claim 3, characterised in that
30 means are provided for selecting one of a plurality of available power control
step sizes in response to commands issued by the primary station, and in that

the combining means are operative if the required step size is less than its minimum available step size.

5 5. A secondary station as claimed in claim 4, characterised in that means are provided for processing a group of power control commands together, the size of the group being determined by the minimum available step size and the required step size.

10 6. A secondary station as claimed in claim 5, characterised in that the size of the group is equal to the ratio between the minimum available step size and the required step size.

15 7. A secondary station as claimed in claim 3, characterised in that the combining means are operative in response to commands issued by the primary station to process a group of power control commands together and in that the size of the group is predetermined.

20 8. A secondary station as claimed in claim 7, characterised in that the power control step size is predetermined.

25 9. A method of operating a radio communication system comprising a primary station and a plurality of secondary stations, the system having a communication channel between the primary station and a secondary station, the method comprising one of the primary and secondary stations (the transmitting station) transmitting power control commands to the other station (the receiving station) to instruct it to adjust its power in steps, wherein the receiving station processes a plurality of power control commands to determine whether to adjust its output transmission power.

30 10. A method as claimed in claim 9, characterised by the transmitting station instructing the receiving station to use a particular power control step

size, and by the receiving station combining power control commands if the required step size is less than the minimum available step size.

11. A method as claimed in claim 10, characterised by the receiving
5 station processing a group of power control commands together, and
determining the size of the group depending on the minimum available step
size and the required step size.

12. A method as claimed in claim 11, characterised by the size of the
10 group being equal to the ratio between the minimum available step size and
the required step size.

13. A method as claimed in claim 9, characterised by the receiving
station processing a group of power control commands together in response to
15 commands issued by the transmitting station and by the size of the group
being predetermined.

14. A method as claimed in claim 13, characterised by the power
control step size being predetermined.

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15. A method as claimed in [any one of claims 9 to 14] characterised
by transmissions on the channel taking place in frames and by the groups of
power control commands having predetermined positions with respect to the
start of each frame.

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16. A method as claimed in claim 15, characterised by the size of the
group being exactly divisible into the number of power control commands
transmitted in a frame.